

### **Remarks**

Claims 1-37 and 43-55 are pending in this application. In an Office Action dated November 9, 2005, the Examiner rejected claims 1-11, 14, 15, 21, and 47-51 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,898,904 to Wang (Wang). The Examiner rejected claims 12, 13, 16-20 and 27-29 under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of U.S. Patent No. 6,577,643 to Rai *et al.* (Rai). The Examiner rejected claims 22-26 and 52-55 under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of Rai and in further view of U.S. Patent No. 6,795,863 to Doty *et al.* (Doty). The Examiner rejected claims 30, 32, 34 and 35 under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of U.S. Patent No. 6,141,565 to Feuerstein *et al.* (Feuerstein). The Examiner rejected claims 31 and 33 under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of U.S. Patent No. 6,738,637 to Marinho *et al.* (Marinho). The Examiner rejected claims 36, 37 and 41 (despite claim 41 being canceled) under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of U.S. Patent No. 6,757,268 to Zendle (Zendle). The Examiner rejected claim 43 under 37 C.F.R. § 103(a) as being unpatentable over Wang in view of U.S. Patent No. 5,640,414 to Blakeney, II *et al.* (Blakeney). The Examiner objected to the specification as having informalities. The Examiner allowed claims 44-46. Applicants respectfully disagree with the Examiner's rejections and request reconsideration in light of the following remarks.

### **The §102 Rejections**

The Examiner rejected claims 1-11, 14, 15, 21 and 47-51 as anticipated by Wang. Claim 1 provides a communication system including a plurality of subscriber units, a plurality of access points and a plurality of distribution points. Each subscriber unit sends and receives information packets using a wireless communication link. Each access point forms a coverage area for exchanging information packets with subscriber units within the coverage area through at least one wireless communication link. Each distribution point is in communication with at least one access point and with at least one additional distribution point. Each distribution point receives receive an information packet for distribution to a destination within the communication system and determines if the information packet destination is to one

of the plurality of subscriber units within the coverage area of an access point in communication with the distribution point. If so, the information packet is forwarded to the access point defining the coverage area containing the subscriber unit. If not, the information packet is forwarded to one of the additional distribution points in communication with the distribution point.

The Examiner asserts that claim 1 is anticipated by Wang. In particular, the Examiner identifies Wang's base stations (1003, 1004) as Applicants' distribution points and Wang's high power transmitters (1021 and 1025) as Applicants' access points. As will be described below, Wang's base stations do not perform the functions claimed for Applicants' distribution points.

Wang discloses a paging system that has two subnetworks, a control subnetwork and a data subnetwork, as described in the Abstract.

A two-way data network includes a broadcast control sub-network and a cellular data sub-network. The broadcast control sub-network includes a few **high-power radio transmitters** broadcasting into a large service area. The cellular data sub-network covers the large service area by a number of **base stations** each servicing a relatively small area. The wireless terminals of the two-way data network monitors the messages in a broadcast control channel at pre-assigned periodic time slots and remain in "sleep" mode at other times. A packet radio transceiver in the wireless terminal sends data to, and receives data from, the cellularized base stations. The broadcast control sub-network is used to notify the subscriber the receipt of a message. In responding to the notification, the location of the subscriber's wireless terminal is made known, thereby eliminating conventional tasks such as location and mobility management tasks and allowing wireless terminals to be low power. Communication between the cellular base stations and the wireless terminals achieves high data rate, low latency and high capacity.

The base stations and high power transmitters are part of different subnetworks. High power transmitters are used in a one-way, broadcast only network that is used to broadcast control messages. The control messages are used to notify wireless terminals of pending two-way communication.

When not engaged in two-way data communication, these wireless terminals monitor only the broadcast channel for the control messages. Thus, in a wireless terminal, the remainder of the circuits, other than the receiver for the broadcast channel, can be placed in a sleep mode until data communication begins. Thus, power efficient operations using a small battery power source can be provided.

Summary of the Invention, col. 5, ll. 54-60.

Only the base stations then participate in two-way data communication network.

In contrast, Applicants' distribution points forward information packets to an access point in communication with the distribution point if a subscriber unit is in the coverage of that access point. Mapped into the Examiner's construction for Wang, Wang's base station would have to send a packet to a high power transmitter in communication with that base station if a wireless terminal was within range of the high power transmitter. This is simply not the system disclosed in Wang.

Returning to the specific language of claim 1, Applicants' distribution points "determine if the information packet destination is to one of the plurality of subscriber units within the coverage area of an access point in communication with the distribution point." The Examiner asserts that this limitation is disclosed in Wang at column 10, lines 65-67, which is included in the following:

When wireless terminal 305 is within a local broadcast area of base station 303, a local radio link, such as radio link 301, can be created between wireless terminal 305 and local interface 520.

This passage neither teaches nor suggests Applicants' distribution points. Wang does not disclose that the base station determines the wireless terminal is within the coverage area of a high power transmitter, as required by the Examiner's construction.

Applicants' distribution points also "receive an information packet for distribution to a destination within the communication system" and "forward the information packet to the access point defining the coverage area containing the subscriber unit if the information packet destination is to one of the plurality of subscriber units within the coverage area of the access point in communication with the distribution point." The Examiner's

support for forwarding a packet from a distribution point to an access point is “col. 10 lines 53-58,” which states:

Further, like two-way wireless data network 300, two-way paging network 1000 is scalable to the size of service area and the number of subscribers. Thus, the capital investment is made incremental as the subscriber base grows. For example, base stations 1003 and 1004 can be added as the subscriber base grows.

Under the Examiner’s construction, the fact that further distribution points (base stations) can be added does not teach or suggest forwarding packets from the distribution points (base stations) to the access points (high power transmitters).

The Examiner has failed to find Applicants’ invention of claim 1 disclosed in Wang. Therefore, claim 1 is not anticipated by Wang. Claims 2-37, which depend from claim 1, are therefore also patentable.

Independent claim 47 provides a distribution point for use in a communication system including a plurality of networked distribution points. The distribution point includes at least one frond end communication interface, at least one back end communication interface and an intelligent packet switching device. Each front end interface communicates with an access point in wireless communication with subscriber units currently assigned to the distribution point. Each back end is in communication with a back haul communication device transferring packets with a back haul communication device in another of the plurality of networked distribution points. The intelligent packet switching device determines a destination for each received packet and determines if the destination is to a subscriber unit currently assigned to the distribution point. The packet is sent to the subscriber unit if the subscriber unit is currently assigned to the distribution point. If the destination is not to a subscriber unit currently assigned to the distribution point, the switching device determines if the destination is to a subscriber unit currently assigned to any other distribution point in the communication system. If the subscriber unit is currently assigned to any other distribution point in the communication system, the switching device identifies another distribution point in back haul communication with the distribution point to which the packet should be forwarded and forwards the packet to the identified distribution point.

The Examiner used the same construction to reject claim 47 that the Examiner used in rejecting claim 1. Although these claims have different scope, the same arguments used in claim 1 apply. Moreover, the Examiner did not find any teaching in Wang for Applicants' intelligent packet switching device. Despite having pointed out his failure to even mention this limitation in both the first and second Office Actions, the Examiner did not provide any teaching in Wang for Applicants' intelligent packet switching device.

The Examiner has failed to find Applicants' invention of claim 47 disclosed in Wang. Therefore, claim 47 is not anticipated by Wang. Claims 48-55, which depend from claim 47, are therefore also patentable.

### **The §103 Rejections**

Independent claim 43 provides a communication system including a plurality of distribution points, a plurality of subscriber units and a supervisor. Each distribution point is in communication with at least one additional distribution point in the plurality of distribution points. Each distribution point is operative to route information packets. Each subscriber unit is operative to communicate information packets to a destination subscriber unit through at least one distribution point in the plurality of distribution points. The supervisor identifies the distribution point with which each subscriber unit is communicating and provides each distribution point with a listing of to which of the at least one additional distribution point in communication with the distribution point information packets should be forwarded for each possible destination distribution point, the listing based on maintaining a minimum quality of service in a path to the destination distribution point.

The Examiner rejected claim 43 as an obvious combination of Wang and Blakeney. The Examiner admits that Wang does not teach Applicants' supervisor, relying instead on Blakeney, at page 17:

[A] supervisor in communication with each distribution point, the supervisor operative to identify the distribution point with each subscriber unit is communicating, [*sic*] refer to col. 3 lines 55-60, and abstract.

The Abstract reads as follows:

In a code division multiple access (CDMA) spread spectrum cellular communication system in which a mobile station user communicates with another system user via at least one base station, wherein each base station transmits a common pilot signal of a different code phase with respect to other base stations in said system, a method for directing communications between said mobile station user and said base stations. The mobile station monitors the signal strength of pilots and reports the measured signal strength to a system controller via the base station through which it is communicating. Command messages from the system controller to a new base station and the mobile station establishes communication through the new base station in addition to the communication through the current base station. When the mobile station detects the falling below a predetermined level of the signal strength of a pilot corresponding to at least one of the base stations through which the mobile station is communicating, the mobile station reports the measured signal strength indicative of the corresponding base station to the system controller via the base stations through which it is communicating. Command messages from the system controller to the identified base station and the mobile station terminates communication through the corresponding base station while communications through the other base station or base stations continue.

The paragraph containing the passage from column 3 reads as follows:

When communications are established with the mobile station through a base station, one which corresponds to the mobile station Active Set, the mobile station monitors the signal strength of identifiable pilot signals transmitted from the various base stations. When a pilot signal exceeds a predetermined threshold level in signal strength, the pilot is added to a Candidate Set at the mobile. The mobile communicates a message to the base station identifying this new pilot and its signal strength. A system controller then uses this information to decide whether to add this pilot to the mobile station Active Set. Should the system controller decide to do so, a message is transmitted to the mobile station through at least the base station which the mobile station is currently communicating through. This message identifies the pilots of the Active Set which correspond to base stations through which the mobile station is to communicate. The system controller also communicates information to each base station corresponding to a new pilot in the Active Set which instructs each of these base stations to establish communications with the mobile station. The mobile

station communications are thus routed through all base stations identified by pilots in the mobile station Active Set.

Neither of these passages teach or fairly suggest providing each particular distribution point with a listing of additional distribution points to which packets should be forwarded from the particular distribution point for each possible destination distribution point.

Claim 43 is patentable over any combination of Wang and Blakeney as neither reference teaches or fairly suggests Applicants' distribution points.

### **The Objection To The Specification**

The Examiner objected to the specification. In particular, the Examiner referenced page 17, line 27, and page 18, line 12, where the "SS7/IP" is referenced as 220. The Examiner alleges that this is different than Figure 3, which shows these boxes as having reference 200. Figure 3 was amended in a paper filed January 13, 2005, to change reference 200 to 220 so as to agree with the specification. The Examiner is therefore requested to withdraw his objection.

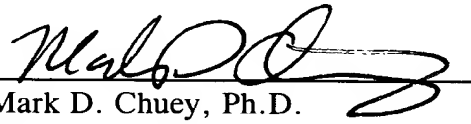
### **Conclusion**

Claims 1-37 and 43-55 are pending in this application. Applicants believe these claims meet all substantive requirements for patentability and respectfully request that this case be passed to issuance. No fee is believed due by filing this paper. However, any fee may be withdrawn from Deposit Account No. 21-0456 as specified in the Application Transmittal.

The Examiner is invited to contact the undersigned regarding any aspect of this case.

Respectfully submitted,

**ANGUS O. DOUGHERTY et al.**

By   
Mark D. Chuey, Ph.D.  
Reg. No. 42,415  
Attorney/Agent for Applicant

Date: February 9, 2006

**BROOKS KUSHMAN P.C.**  
1000 Town Center, 22nd Floor  
Southfield, MI 48075-1238  
Phone: 248-358-4400  
Fax: 248-358-3351